

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-7 (canceled).

Claim 8 (new): A temperature-compensated piezoelectric oscillator comprising:
a piezoelectric element;
an amplifying circuit connected to a first end of the piezoelectric element;
a variable capacitance element connected a second end of the piezoelectric element; and

a compensation voltage generation circuit for applying a voltage corresponding to a temperature to the variable capacitance element; wherein

the compensation voltage generation circuit includes a first voltage generation circuit for applying to a first end of the variable capacitance element a first voltage that is variable depending on an ambient temperature and second voltage generation circuit for applying to a second end of the variable capacitance element a second voltage that is variable depending on the ambient temperature in a direction opposite to the first voltage.

Claim 9 (new): The temperature-compensated piezoelectric oscillator according to Claim 8, wherein each of the first and second voltage generation circuits includes at least one thermo-sensitive element and a plurality of resistance elements.

Claim 10 (new): The temperature-compensated piezoelectric oscillator according to Claim 8, wherein each of the first and second voltage generation circuits includes a parallel circuit connected to a terminal of the temperature-compensated piezoelectric oscillator and includes a first thermo-sensitive element and a first resistance element, a second thermo-sensitive element and a second resistance element connected in series to said parallel circuit, one end of said second thermo-sensitive element being grounded.

Claim 11 (new): The temperature-compensated piezoelectric oscillator according to Claim 8, wherein each of the first and second voltage generation circuits includes a thermo-sensitive element and a first resistance element connected in parallel to define a parallel circuit and a second resistance element connected in series to the parallel circuit.

Claim 12 (new): The temperature-compensated piezoelectric oscillator according to Claim 9, wherein the thermo-sensitive element is a thermistor.

Claim 13 (new): The temperature-compensated piezoelectric oscillator according to Claim 8, further comprising:

a temperature compensation data generation circuit for detecting the ambient temperature and for generating temperature compensation data corresponding to the detected temperature; wherein

each of the first and second voltage generation circuits includes a DA converter arranged to convert the temperature compensation data in a digital format into an analog signal.

Claim 14 (new): The temperature-compensated piezoelectric oscillator according to Claim 8, wherein the piezoelectric element is an AT-cut quartz crystal resonator.

Claim 15 (new): The temperature-compensated piezoelectric oscillator according to Claim 8, wherein the variable capacitance element is a varactor diode.

Claim 16 (new): The temperature-compensated piezoelectric oscillator according to Claim 15, wherein an anode of the varactor diode is connected to the piezoelectric element and a cathode of the varactor diode is grounded via a high-frequency bypass capacitor.

Claim 17 (new): The temperature-compensated piezoelectric oscillator according to Claim 8, wherein the amplifying circuit includes an NPN transistor, a plurality of resistors and at least one capacitor.

Claim 18 (new): The temperature-compensated piezoelectric oscillator according to Claim 17, wherein a base of the NPN transistor is connected to the piezoelectric element, a collector of the NPN transistor is connected a terminal of the temperature-compensated piezoelectric oscillator via one of the plurality of resistors, and an emitter

of the NPN transistor is grounded via another of the plurality of resistors and the at least one capacitor.

Claim 19 (new): An electronic apparatus comprising the temperature-compensated piezoelectric oscillator as set forth in Claim 8.

Claim 20 (new): The electronic apparatus according to claim 19, further comprising:

an antenna;
a duplexer connected to the antenna;
a plurality of amplifiers connected to the duplexer;
a plurality of mixers, each being connected to a respective one of the plurality of amplifiers;

a voltage control oscillator connected to said plurality of mixers;
a PLL circuit and a low pass filter connected to the voltage control oscillator;
wherein

said temperature-compensated piezoelectric oscillator is connected to said the voltage control oscillator.